

AMENDMENT TO THE CLAIMS

Please amend the following claims.

1. (Currently Amended) An electronic assembly, comprising:
a circuit board;
a package substrate, having first and second sides, attached to the circuit board;
a plurality of electrical contact formations on the first side of the package substrate electrically interconnecting the circuit board and the package substrate;
a stress relief layer on the first side of the package substrate and contracting the plurality of electrical contact formations, a space being defined between the stress relief layer and the circuit board; and
a microelectronic die, having an integrated circuit formed therein, mounted on the second side of the package substrate.
2. (Currently Amended) The electronic assembly of claim 1, wherein each of the plurality of electrical contact formation formations has a height and the stress relief layer has a thickness, the thickness of the stress relief layer being less than the height of the plurality of contact formations.
3. (Currently Amended) The electronic assembly of claim 1, wherein the stress relief layer is adjacent to a portion of the plurality of electrical contact formations that corresponds to only a portion of the height of the contact formations.

4. (Currently Amended) The electronic assembly of claim 3, wherein the heights of the plurality of electrical contact formations are between 0.2 and 1.5 mm.
5. (Original) The electronic assembly of claim 4, wherein the stress relief layer is polymeric.
6. (Original) The electronic assembly of claim 5, wherein the stress relief layer is an adhesive paste.
7. (Original) The electronic assembly of claim 6, wherein the thickness of the stress relief layer is between 0.15 and 0.225 mm.
8. (Original) The electronic assembly of claim 7, wherein the space is an air space.
9. (Original) The electronic assembly of claim 8, wherein the microelectronic die is a microprocessor.
10. (Currently Amended) An electronic assembly, comprising:
 - a package substrate having first and second sides;
 - a microelectronic die mounted to the first side of the package substrate;
 - a plurality of electrical contact formations attached to the second side of the package substrate, each having a height and configured to electrically interconnect;
 - and

a stress relief layer on the second side of the package substrate in contact with the plurality of electrical contact formations, the layer having a thickness less than the height of the contact formations and being adjacent to only a portion of the height of the plurality of electrical contact formations.

11. (Original) The electronic assembly of claim 10, wherein the microelectronic die is a microprocessor.

12. (Currently Amended) The electronic assembly of claim 11, wherein the plurality of electrical contact formations are BGA solder balls.

13. (Original) The electronic assembly of claim 12, wherein the stress relief layer is polymeric.

14. (Currently Amended) An electronic assembly, comprising:

a circuit board;

a package substrate, having first and second sides, attached to the circuit board;

a plurality of electrical contact formations on the first side of the package substrate electronically interconnecting the circuit board and the package substrate;

a stress relief layer between the package substrate and the circuit board and in contact with the plurality of electrical connections; and

a microprocessor mounted on the second side of the package substrate.

15. (Original) The electronic assembly of claim 14, wherein the circuit board is a motherboard.

16. (Cancelled)

17. (Currently Amended) A method of constructing an electronic assembly, comprising:

depositing a stress relief layer on a side of a package substrate, the side having a plurality of ~~contacts~~ electrical contact formations thereon such that the stress relief layer comes in contact with the plurality of electrical contact formations;
and

attaching the contact formations to a circuit board, a space being defined between the stress relief layer and the circuit board.

18. (Original) The method of claim 17, wherein a microelectronic die is mounted on an opposing side of the package substrate.

19. (Currently Amended) The method of claim 18, wherein the contacts have a height and the stress relief layer has a thickness, the thickness of the stress relief layer being less than the height of the plurality of electrical contact formations.

20. (Cancelled)

21. (Original) The method of claim ~~20~~ 17, wherein the stress relief layer is polymeric.

22. (Original) The method of claim 21, wherein the stress relief layer is only deposited onto selected portions of the side of the package substrate.
23. (Original) The method of claim 21, wherein the stress relief layer flows onto the package substrate.
24. (Original) The method of claim 23, wherein the stress relief layer is first deposited onto a central portion of the side of the package substrate.
25. (Original) The method of claim 21, wherein the stress relief layer is extruded onto the side of the side of the package substrate.
26. (Currently Amended) ~~The method of claim 21~~ A method of constructing an electronic assembly comprising:
_____ depositing a stress relief layer on a side of a package substrate, the side having a plurality of contact formation thereon, wherein the stress relief layer is a cast film, having a plurality of holes therein, and said depositing is placing the cast film on the side of the package substrate so that the contact formations extend through the holes; and
_____ attaching the contact formations to a circuit board, a space being defined between the stress relief layer and the circuit board.
27. (Currently Amended) A method comprising:

placing a plurality of semiconductor packages on a support, the semiconductor packages each having a package substrate with a first side having a microelectronic die mounted thereon and a second side with a plurality of electrical contact formations connected thereto, the plurality of electrical contact formations having a height;

suspending a stencil over the semiconductor packages, the stencil having a plurality of holes; and

flowing a paste through the holes of the stencil to form a stress relief layer on the second side of the package substrate of each semiconductor package in contact with the plurality of electrical contact formations, the stress relief layer having a thickness, the thickness being less than the height of the plurality of electrical contact formations.

28. (Original) The method of claim 27, further comprising placing the semiconductor packages onto circuit boards, the contact formations interconnecting the package substrates and the circuit board, a space being defined between the circuit board and the second side of the package substrate.

29. (Original) The method of claim 28, wherein the stress relief layer is adjacent to a portion of the contact formations that corresponds to only a portion of the height of the contact formations.

30. (Original) The method of claim 29, wherein the second sides of the package substrates face the stencil.